

Having thus described the invention, we hereby claim:

1. A method for segmenting an image, the image comprising pixels and being represented by image data, the method comprising steps of:
  - obtaining image data;
  - inputting the image data into a first image segmentation module;
  - 5 generating first segmentation data by the first image segmentation module, the first image segmentation data representing at least one first characteristic of the image data;
  - inputting the image data into a second image segmentation module;
  - generating second image segmentation data by the second image
  - 10 segmentation module, the second image segmentation data representing at least one second characteristic of the image data; and,
  - integrating the first image segmentation data with the second image segmentation data to obtain modified image data.
2. The method as set forth in claim 1 wherein the inputting of the image data to the first image segmentation module and the inputting of the image data to the second image segmentation module are accomplished concurrently.
3. The method as set forth in claim 1 wherein the generating of the first image segmentation data comprises generating first characteristic data representing a background layer, a selector layer and a foreground layer of the image data.
4. The method as set forth in claim 1 wherein the generating of the second image segmentation data comprises generating second characteristic data representing rendering hints.
5. The method as set forth in claim 1 wherein the integrating of the first and second image segmentation data comprises generating the modified image data such that it comprises a background layer, a selector layer, and a foreground layer of the image data and a layer of information representing rendering hint for the  
5 image data.
6. A system for segmenting an image, the image comprising pixels and being represented by image data, the system comprising:
  - means for obtaining image data;

means for generating first segmentation data, the first image segmentation  
5 data representing at least one first characteristic of the image data;

means for generating second image segmentation data, the second image  
segmentation data representing at least one second characteristic of the image  
data; and,

10 means for integrating the first image segmentation data with the second  
image segmentation data to obtain modified image data.

7. The system as set forth in claim 6 further comprising means for inputting  
the image data to the first image segmentation module and inputting the image  
data to the second image segmentation module concurrently.

8. The system as set forth in claim 6 wherein the first image segmentation  
data comprises first characteristic data representing a background layer, a selector  
layer and a foreground layer of the image data.

9. The system as set forth in claim 6 wherein the second image segmentation  
data comprises second characteristic data representing rendering hints.

10. The system as set forth in claim 6 wherein the modified image data  
comprises a background layer, a selector layer, and a foreground layer of the  
image data and a layer of information representing rendering hint for the image  
data.

11. The system as set forth in claim 6 wherein the means for generating the  
first segmentation data comprises a first segmentation module.

12. The system as set forth in claim 6 wherein the means for generating the  
second image segmentation data comprises a second image segmentation module.

13. The system as set forth in claim 11 wherein the first segmentation module  
comprises a block based image segmentation module.

14. The system as set forth in claim 11 wherein the first segmentation module  
comprises an object based image segmentation module.

15. The system as set forth in claim 12 wherein the second image  
segmentation module comprises a pixel based image segmentation module.

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16. An image rendering system adapted for segmenting an image, the image comprising pixels and being represented by image data, the system comprising:
- a scanner operative to obtain image data;
  - a bitmap generator operative to generate a bitmap corresponding to the
  - 5 image data;
  - a first image segmentation module operative to generate first image segmentation data, the first image segmentation data representing at least one first characteristic of the image data;
  - a second image segmentation module operative to generate second image
  - 10 segmentation data, the second image segmentation data representing at least one second characteristic of the image data;
  - a combining module operative to combine the first image segmentation data with the second image segmentation data to obtain modified image data;
  - a compression module operative to compress the modified image data;
  - 15 a storage module operative to store the compressed image data;
  - a decompression module operative to decompress the stored image data;
  - and,
  - a print engine operative to render the image based on the decompressed data.
17. The system as set forth in claim 16 wherein the system is included in a xerographic printing environment.
18. The system as set forth in claim 16 wherein the print engine is a xerographic print engine.
19. The system as set forth in claim 16 wherein the first image segmentation data comprises first characteristic data representing a background layer, a selector layer and a foreground layer of the image data.
20. The system as set forth in claim 16 wherein the second image segmentation data comprises second characteristic data representing rendering hints.
21. The system as set forth in claim 16 wherein the first and second segmentation data comprises layers whereby an absence of a selected layer establishes a default position for a characteristic represented by the selected layer.

22. The system as set forth in claim 16 further comprising a third image segmentation module operative to generate third image segmentation data.

23. The system as set forth in claim 22 wherein the combining module is operative to combine the third image segmentation data with the first and second image segmentation data.

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